

SECTION 8.9

Agriculture and Soils

8.9 Agriculture and Soils

8.9.1 Introduction

The agriculture and soils section of this Small Power Plant Exemption (SPPE) Application discusses potential impacts of the proposed Modesto Irrigation District (MID) Electric Generation Station (MEGS) Project (Project) on agricultural lands and soil resources. This section provides an assessment of the significance of impacts during Project construction and operation for the MEGS site and associated linear facilities (i.e., natural gas supply, water supply, water discharge, stormwater discharge, and electric transmission line corridors).

Section 8.9.2 presents the laws, ordinances, regulations, and standards (LORS) applicable to agriculture and soils. Section 8.9.3 describes the existing environmental setting that could be affected, including agricultural use and soil types. Section 8.9.4 identifies potential environmental effects, if any, from Project development, and Section 8.9.5 presents mitigation measures. Section 8.9.6 describes the required permits and provides agency contacts. Section 8.9.7 provides the references used to develop this subsection of the SPPE.

A map of soil types is provided in Figure 8.9-1 (all figures are located at the end of this section). Important farmland is shown in Figure 8.9-2. LORS are described in Table 8.9-1. The soil descriptions and characteristics are summarized in Table 8.9-2. Project impacts are summarized in Table 8.9-3. Soil loss is discussed in Section 8.9.3.4. The effect of plant emissions on soils is discussed in Section 8.9.4.2. Required permits are summarized in Table 8.9-4.

8.9.2 Laws, Ordinances, Regulations and Standards

The federal, state, and local LORS that apply to agricultural and soil resources for the MEGS Project are discussed below, and are summarized in Table 8.9-1.

8.9.2.1 Federal

Federal Water Pollution Control Act of 1972 and the Clean Water Act of 1977

The Federal Water Pollution Control Act of 1972, commonly referred to as the Clean Water Act (CWA) following amendment in 1977, establishes requirements for discharges of stormwater or wastewater from any point source that would affect the beneficial uses of waters of the United States. The State Water Resources Control Board (SWRCB) adopted one statewide National Pollutant Discharge Elimination System (NPDES) General Permit that would apply to stormwater discharges associated with construction, industrial, and municipal activities. The Regional Water Quality Control Board (RWQCB) is the administering agency for the NPDES permit program. The CWA's primary effect on agriculture and soils within the MEGS facility and along linear features consists of control of soil erosion and sedimentation during construction. This includes the preparation and execution of erosion and sedimentation control plans and measures for any soil disturbance during construction.

U.S. Department of Agriculture Engineering Standards

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), *National Engineering Handbook*, 1983, Sections 2 and 3 provide standards for soil conservation during planning, design, and construction. Activities associated with the proposed Project will conform to applicable standards in the National Engineering Handbook to ensure that the Project will not cause soil loss through accelerated erosion.

TABLE 8.9-1

Laws, Ordinances, Regulations, and Standards for Agricultural and Soil Resources

Jurisdiction	LORS	Purpose	Regulating Agency	Applicability (SPPE Section Explaining Conformance)
Federal	Federal Water Pollution Control Act of 1972: Clean Water Act of 1977 (including 1987 amendments).	Regulates stormwater discharge from construction and industrial activities	RWQCB – Central Valley Region under State Water Resources Control Board	Subsections 8.9.2.1 and 8.9.4.2.
	Natural Resources Conservation Service (1983), <i>National Engineering Handbook</i> , Sections 2 and 3.	Standards for soil conservation	Natural Resources Conservation Commission	Subsections 8.9.2.1 and 8.9.5.
State	California Public Resources Code 25523(a); 20 CCR 1752, 1752.5, 2300-2309, and Chapter 2, Subchapter 5, Article 1, Appendix B, Part (i).	Describes requirements for protection of environmental quality	California Energy Commission (CEC)	Subsection 8.9.4.2.
	Guidelines for Implementation of CEQA, Appendix G; 14 CCR 15000-15387.	Regulates erosion and sedimentation; conversion of agricultural lands	CEC	Subsection 8.9.4.2.
	Porter-Cologne Water Quality Control Act of 1972; Cal. Water Code 13260-13269; 23 CCR Chapter 9.	Regulates stormwater discharge	CEC and the Central Valley Region under State Water Resources Control Board	Subsection 8.9.5.
Local	City of Ripon General Plan 2035, 1998	Describes local policies for agricultural and soil resources	City of Ripon, Planning and Engineering Departments	Subsection 8.9.4.2.
	City of Ripon Municipal Code, 2000	Regulates grading, erosion, and sediment control for construction projects within City limits and rights-of-way (ROWs)	City of Ripon, Planning and Engineering Departments	Subsection 8.9.4.2.
	San Joaquin County General Plan, 1992a.	Describes local policies for agricultural and soil resources	San Joaquin County Board of Supervisors	Subsection 8.9.4.2.
	San Joaquin County Development Title, 1992b.	Regulates agricultural zones and Williams	San Joaquin County Board of Supervisors	Subsection 8.9.4.2.

TABLE 8.9-1

Laws, Ordinances, Regulations, and Standards for Agricultural and Soil Resources

Jurisdiction	LORS	Purpose	Regulating Agency	Applicability (SPPE Section Explaining Conformance)
		Act contracts, on-site wastewater disposal facilities, and grading and excavation		
	California Land Conservation Act of 1965 (Williamson Act).	Provides financial incentives for conservation of agricultural lands	California Dept. of Conservation, Office of Land Conservation, San Joaquin County Board of Supervisors	Subsection 8.9.4.2.

8.9.2.2 State**California Public Resources Code Section 25523(a); Title 20 California Code of Regulations Sections 1752, 1752.5, 2300-2309, and Chapter 2, Subchapter 5, Article 1, Appendix B, Part (i)**

These regulations stipulate the environmental review and siting procedures to be followed in the development of power generation projects larger than 50 MW. The California Energy Commission (CEC) is the administering agency for this authority.

Guidelines for Implementation of the California Environmental Quality Act (CEQA) of 1970, 14 CCR, Sections 15000-15387, Appendix G

The CEQA authority must be considered for agriculture and soils for the MEGS because the Project could potentially affect the environment by causing excessive erosion or sedimentation, or impair the agricultural productivity of prime or unique farmlands, or farmlands of statewide importance.

California Porter-Cologne Water Quality Control Act of 1972; California Water Code, Sections 13260-13269; 23 CFR Chapter 9

The California Water Code requires protection of water quality by appropriate design, sizing, and construction of erosion and sediment controls. The discharge of soil into surface waters resulting from land disturbance may require filing a report of waste discharge (see Water Code Section 13260a).

8.9.2.3 Local

The City of Ripon has established a permitting process to evaluate grading plans for proposed projects. The municipal code for the site plan permit review process (City of Ripon Municipal Code Chapter 16.72) establishes permitting requirements and exemptions for general earthwork operations, sediment transport, and erosion control activities that can cause the discharge of pollutants into stormwater systems or watercourses. The City of Ripon also administers encroachment permits for construction activities and franchise agreements for facilities within City of Ripon ROWs.

The proposed MEGS is located entirely within the City of Ripon boundaries and does not affect lands in unincorporated portions of San Joaquin County. As such, regulations associated with San Joaquin County authorities do not directly bear upon the Project. However, related information on policies and regulations for San Joaquin County are included for completeness. The San Joaquin County (1992a) General Plan includes an agricultural element describing policies and goals pertaining to agricultural land and conversion issues.

The County does regulate projects in unincorporated areas under Title 9 Development Title (San Joaquin County, 1992b). These county regulations would apply to the MEGS if any of the proposed activities occurred outside of the City of Ripon limits. It is presumed that the City's previous rezoning of the MEGS Project area and vicinity to industrial use was undertaken with consideration of the County's General Plan as it pertains to conversion of agricultural lands.

City of Ripon General Plan 2035, 1998

The City of Ripon (City) General Plan presents policies that provide for guidance and implementation of land use controls in and around the City's sphere of influence. Included in the general plan are provisions for protecting and maintaining open space land uses, ranging from parks to agriculture.

The primary impact on soils and agriculture from future development is the loss of productive farmland. However, since very little land is devoted to agricultural use within the City's sphere of influence, the effect of future development will be primarily felt around the unincorporated areas of the City. The following is a brief summary of goals and policies presented in the General Plan.

Goals provided in the General Plan include assuring the economic viability of the community (Land Use and Growth Accommodations, Goal B) and reducing urban development impacts on adjacent farmlands (Open Space and Conservation, Goal D).

Policies are included in the General Plan to provide the suggested means to reach the stated goals. The policy for Goal B stated above includes Policy B5, adoption of a Right to Farm Ordinance (Ordinance No. 608), preserving, protecting, and encouraging the use of agricultural lands. Policies for Goal D include the following policies pertaining to soils and agriculture:

- Policy D1 discouraging the premature conversion of agricultural lands
- Policy D4 requiring conformance with the National Pollutant Discharge Elimination System (NPDES) permitting process
- Policy D14 encouraging landowners in the urban area currently participating in the Williamson Act to file for non-renewal if development of their property is anticipated

City of Ripon Municipal Code

Prior to construction of the proposed site and associated linears, a site plan permit will be required in accordance with City of Ripon Municipal Code Chapter 16.72. The purpose of the site plan permit process (i.e., grading plan) is to provide a way for the City to evaluate projects that have the potential to adversely affect other land uses, transportation, or facilities in proximity to the proposed Project. The site plan permit process follows the

general requirements of the State of California Uniform Building Code (UBC) and requires grading plans to collect stormwater at a central point within the site before discharging from this single point. The permitting process seeks to eliminate direct, adverse impacts to neighboring properties from erosion and sedimentation due to construction activities. The site plan permit applications are first evaluated within the Planning Commission for adequacy before they are passed to the Engineering Department.

Encroachment permits are also required under the City of Ripon Municipal Code (Chapter 12.12.010). The encroachment permits are used when proposed construction activities will occur within existing City of Ripon ROWs (e.g., roadways or utility lines). The Planning Commission and the Engineering Department evaluate the encroachment permit concurrently with the site plan permit application.

Franchise agreements are required for facilities within City of Ripon ROWs. The Modesto Irrigation District already has an existing franchise agreement with the City of Ripon (dated May 21, 1996). The existing franchise (permissions) agreement covers the electrical transmission (and distribution) facilities that would be constructed.

San Joaquin County General Plan 2010 and Title 9 Development Title

The objectives of the San Joaquin County (1992a) General Plan are intended to protect agricultural lands for the continuation of commercial agricultural enterprises, small-scale farming operations, and the preservation of open space. It also identifies and classifies agricultural lands with small-scale farming operations and dwellings and seeks to minimize impacts to agriculture from urban development. The County implements its agricultural policies through participation in the Farmland Mapping and Monitoring Program (FMMP) and use of this information in the project planning approval process.

As previously stated, San Joaquin County Title 9 Development Title Regulations (San Joaquin County, 1992b) pertain to projects in unincorporated areas. As such, they do not directly affect the MEGS Project. The Title 9 Development Title regulations relate to agricultural land use (including Williamson Act contracts), infrastructure standards (e.g., onsite wastewater disposal facilities and stormwater drainage), and grading and excavations. The issues pertaining to infrastructure, grading, and excavation will be addressed under the City of Ripon review process. It is presumed that the City's previous rezoning of the MEGS Project area and vicinity to industrial use was undertaken with consideration of the County's General Plan as it pertains to conversion of agricultural lands.

California Land Conservation Act of 1965.

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses. A landowner can decide that he will not convert a certain parcel of land out of agricultural use for a 10-year period (with an annual review of the land use status). In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. Participation in the Williamson Act program is dependent on County adoption and implementation of the program, and is voluntary for landowners.

8.9.3 Environmental Setting

The 12.25-acre MEGS site is located within the City of Ripon in the southern portion of San Joaquin County, California. The site is located within a larger property that was previously used for agricultural purposes. However, the land has been cleared and has not been actively managed for agricultural purposes since 1995. The MEGS site is currently undeveloped (cleared and disked) and is located within a larger area that has been zoned by the City of Ripon for heavy industrial use.

The MEGS site is approximately 0.25 mile southwest of the existing MID Stockton Substation (Figure 8.9-1) and will be connected to the substation by a 69-kV overhead subtransmission line. A fiber optic communication cable will also be installed on the same poles. The Project also includes construction of approximately 0.25 miles of new gas line, north along South Stockton Avenue, to the local Pacific Gas and Electric Company (PG&E) underground gas main.

The underground water supply (both potable and non-potable), sewer, wastewater, and stormwater pipelines for the MEGS will be connected to new pipelines being constructed by the City of Ripon as part of infrastructure improvements along the extensions of South Stockton Avenue and Doak Boulevard. The MEGS water supply, wastewater, sewer, and stormwater pipelines will each be no more than 30 feet in length, and will tie into these new City pipelines (see Section 2.0, Project and Facility Description). The MEGS water supply and discharge pipelines will be installed beneath the South Stockton Avenue ROW. South Stockton Avenue and Doak Boulevard will also be paved as part of the City's infrastructure improvements.

Soil resource information for the MEGS site and vicinity was derived from published soil surveys prepared by the National Resources Conservation Service (NRCS) for San Joaquin County, California (NRCS, 1992) as shown on Figure 8.9-1. Soil information for areas south of the Stanislaus River was derived from the NRCS soil survey for Eastern Stanislaus Area, California (NRCS, 1964) also shown on Figure 8.9-1. Detailed soil descriptions were developed from the soil survey publications (NRCS, 1964; 1992) and from the Official Series Descriptions (OSD) web page (NRCS, 2002) as shown on Figure 8.9-1 and summarized in Table 8.9-2. Soil characteristics in the Project area summarized in Table 8.9-2 include depth, texture, drainage, permeability, erosion hazard rating, land capability classification, and Storie Index Ratings (used as an indicator of its revegetation potential). The designation of the soil mapping unit as "Prime Farmland" is also included in Table 8.9-2, where applicable.

Figure 8.9-2 shows "Important Farmlands" as defined by the California Department of Conservation (CDC) (CDC, 2000). The farmland mapping designated specific areas as follows: Prime Farmland; Farmland of Statewide Importance; Unique Farmland; Farmlands of Local Importance; Grazing Land; Urban and Built-Up Land; Other Land; and Water.

As previously indicated, the proposed MEGS site and associated field extending south and west are currently vacant (cleared and disked), with no current associated agricultural production. A radio tower and transmission line tower are located in the southern portion of this property. The property located to the east across South Stockton Avenue is a fenced tree plantation (woodlot) owned by the Fox River Paper Co. An undeveloped parcel, likely also formerly used for agriculture, is located immediately to the northeast of the MEGS site, and the existing MID Stockton Substation is adjacent to its western boundary.

Industrial/commercial developments are located immediately north of the MEGS site. Substantial residential developments are located beyond the cleared land to the east of the MEGS site. Evaporation/settling ponds associated with the City of Ripon water treatment facility on Doak Boulevard are located south of the site.

The 12.25-acre MEGS Project site would include approximately 8 acres of permanently cleared, graded, filled, and paved or covered with gravel for the plant site, roadways, and parking areas. The remaining 4.25 acres would be used for equipment laydown and parking during construction. After construction, the 4.25 acres would be available for sale, equipment storage, or future development as determined by the MID Board of Directors.

TABLE 8.9-2
Mapping Unit Descriptions and Characteristics

Map Unit	Description
142	Delhi loamy sand – slope class (0 to 2%)
	<ul style="list-style-type: none"> – Somewhat excessively drained – Very deep soils, nearly level relief – Formed in wind-modified alluvium derived from granitic rock sources – Loamy sand surface and subsurface – Permeability is rapid – Runoff is slow – Water erosion hazard is slight – Severe wind erosion potential – Capability Class: IVe (non-irrigated); IIIs (irrigated) – StorieIndex Rating: Index 64; Grade 2, Fertility limitation – Taxonomic class: Mixed, thermic Typic Xeropsamments – Elevation range from 25 to 135 feet
266	Veritas fine sandy loam – slope class (0 to 2%)
	<ul style="list-style-type: none"> – Prime Farmland (where irrigated) – Somewhat poorly drained, possible wetlands unless improved by levees and reclamation projects – Deep soils over duripan, formed on nearly level low fan terraces – Formed in alluvium derived from mixed rock sources – Fine sandy loam surface and subsurface over indurated hardpan – Permeability is moderately rapid – Runoff is slow; subject to rare flooding – Water erosion hazard is slight – Moderate wind erosion potential – Capability Class: IVs (non-irrigated); IIs (irrigated) – StorieIndex Rating: Index 57; Grade 3, Rare flooding limitation – Taxonomic class: Coarse-loamy, mixed, superactive, thermic Typic Haploxerolls – Elevation range from 20 to 75 feet

Notes:

Soil characteristics are based on soil mapping provided in the published soil surveys (NRCS, 1964; 1992) and a review of corresponding OSDs. Soil map units described above are limited to those that would be directly impacted by the MEGS and associated linear features.

8.9.3.1 Agricultural Use

The MEGS site and proposed linear features (water supply, wastewater discharge, stormwater, subtransmission line, fiber optic cable, and natural gas pipeline) are located in the City of Ripon, within areas currently designated for heavy industrial use. The MEGS site

is located in the northeastern corner of a larger property which was previously used for agricultural purposes (row crops and/or pasture). However, the property has been completely cleared and disked and has not been used for agriculture since 1995. The land containing the proposed MEGS site is not currently under a Williamson Act contract (Nordstrom, 2003).

A similar parcel of cleared land is located to the northeast of the proposed MEGS site.

As shown on Figure 8.9-2, the MEGS Project site is located in an area that is designated as a Prime Farmland. According to the NRCS information, this soil mapping unit (266) Veritas fine sandy loam is considered as Prime Farmland only when irrigated. Aerial photographs on file at the FMMP show that the site was used for irrigated agricultural purposes as late as 1995 and has been idle since at least 1997 (Patch, 2003).

Because the FMMP requires an area to have been fallow over the two previous update cycles (i.e., every two years), this area should be removed from the Prime Farmland category during the 2002 update, which began for San Joaquin County by February 2003 (Patch, 2003). If during the FMMP update field verification process it is determined that the property has remained idle, then the property would likely be changed to a Farmland of Local Importance (Patch, 2003).

The proposed natural gas pipeline will extend north from the MEGS site along South Stockton Avenue. All of the area immediately north of the site is designated as Urban and Built-Up Land and has already been developed for industrial use. Residential areas are also present along South Stockton Avenue north of the industrial developments. The proposed 69-kV subtransmission line/fiber optic cable would run along an existing roadway northeast to the existing MID Stockton Substation. This transmission line will occur between lands mapped as Farmland of Local Importance to the north and Prime Farmland to the south.

It was reported by Ernie Tyhurst, City of Ripon Director of Planning, that the MEGS site and adjacent property was already zoned for industrial use when the area was annexed to the City of Ripon in 1977 (Tyhurst, 2003). The MEGS Project site is located in an area that is no longer used for agricultural purposes. The Project linears will be constructed within Urban and Built-Up Land areas or along/in existing roadways. For these reasons, construction of the MEGS Project (including linears) will not affect any functioning agricultural resources.

8.9.3.2 Soil Types

Soil resources would be directly affected at the MEGS Project site, along the proposed natural gas pipeline, and by the subtransmission tower locations. The mapped soil information for the MEGS Project area is represented on Figure 8.9-1 and summarized in Table 8.9-2. Based on the soil mapping information (NRCS, 1992), the entire MEGS Project is located within the Veritas fine sandy loam [266] soil mapping unit (NRCS, 1992).

The proposed natural gas pipeline is estimated to be 0.25 miles in length and is routed north along South Stockton Avenue. A different soil mapping unit, Delhi loamy sand [142], occurs approximately 1,500 ft north of the proposed MEGS site. This soil unit is discussed in Table 8.9-2 because it has a potential to occur in the northern portion of the gas pipeline. Historically, the soils at the MEGS site and vicinity were used for agricultural purposes.

Currently, the MEGS site is undeveloped. Areas along the proposed natural gas pipeline and overhead transmission line alignments are developed. Furthermore, the City of Ripon is currently planning to upgrade infrastructure (water and sewer pipelines) and extend pavement along South Stockton Avenue and Doak Boulevard in the MEGS Project vicinity to support industrial development in this area.

8.9.3.3 Prime Farmlands

Important Farmlands in the Project vicinity are shown on Figure 8.9-2 (CDC, 2000) and summarized in Table 8.9-2. This map is taken from information provided from the FMMP, administered by the Division of Land Resource Protection in the California Department of Conservation (CDC). The FMMP Map (Figure 8.9-2) shows that the MEGS site and surrounding areas (except north) are mapped as Prime Farmland. Lands to the north are mapped as Urban and Built-Up Land, as are isolated areas associated with the wastewater treatment facilities to the south and the industrial development to the east. As previously indicated, the FMMP status for the MEGS site will likely change to Farmland of Local Importance in the currently scheduled (2002) update cycle for San Joaquin County. The FMMP GIS files contain an aerial photograph that shows that the MEGS site was under irrigated agricultural production during the 1995 growing season, and that the property has been idle since at least 1997 when it was last field verified by the CDC. The change in FMMP status would be reflected in updated FMMP maps that would be published in approximately six months from completion of the current update process. This change would occur when field verification confirms that the property has remained idle (i.e., not farmed) since at least 1997 (Patch, 2003).

Farmland of Local Importance is indicated for the property located immediately northeast of the MEGS site and for the area to the south and southeast along the Stanislaus River. The riparian areas along the river are designated as Other Lands with Prime Farmlands mapped on the south side of the Stanislaus River.

Statistics from a 2000 inventory of important farmlands in San Joaquin County indicate that there are approximately 630,990 acres of land classified as Prime Farmland, Farmlands of Statewide Importance, Unique Farmlands, or Farmlands of Local Significance (CDC, 2003). The inventory also indicates a 0.22 percent decline in important farmlands county-wide between 1998 and 2000. The increase in Urban and Built-Up Land and Other Land classifications noted for the 1998 to 2000 period were greater than the important farmland losses and likely account for the losses.

As previously noted, the MEGS Project site is no longer used for agricultural purposes and has been rezoned by the City of Ripon for heavy industrial uses since this area was annexed to the City in 1977. No farming has reportedly occurred at the site and surrounding property since at least 1997 (Patch, 2003). The soil type in which the MEGS site is located is considered Prime Farmland only when irrigated. While aerial photographs show the MEGS site under irrigated agricultural production during the 1995 growing season, there were no irrigation facilities observed during site visits in 2002. The proposed linears will be constructed along/in existing roadways. All other linears (potable and non-potable water and sewer) will run to planned utilities lines that will be located immediately adjacent to the site under Stockton Avenue. For these reasons, the proposed MEGS Project is not expected to impact Important Farmlands.

8.9.3.4 Soil Loss and Erosion

The water erosion hazard designations for soils in the Project area, as shown in Table 8.9-2, are indicated to be slight. The soil unit slope classifications for these soils types are shown to be between 0 and 2 percent. Topographic slopes in the immediate Project area are less than 2 percent. Given the nearly level topography, soil types, existing development, and the anticipated use of construction erosion control best management practices (BMPs), the overall potential for soil loss from water erosion is considered to be negligible.

As provided in the soil survey, the potential for wind erosion is also summarized in Table 8.9-2. For the primary soil mapping unit in the Project area, [266] Veritas fine sandy loam, a moderate wind erosion hazard is indicated. Although direct impacts in the adjacent soil unit to the north, [142] Delhi loamy sand, are not anticipated (except possibly in the most northern portion of the natural gas pipeline alignment), it should be noted that the wind erosion hazards is indicated to be severe. Wind erosion hazards are generally associated with bare or disturbed soil. Based on the anticipated soil conditions, soil erosion by wind will require adequate controls with BMPs, including regular wetting of construction areas and soil stockpiles.

It is assumed that other BMPs that would be instituted to prevent erosion and sedimentation from exposed soil areas during precipitation events would result in a similar, significant reduction in offsite soil movement. Given the sandy nature of the soil units, BMPs to control wind erosion losses will be required. The soils are indicated to be sandy in nature which could result in low natural fertility and water holding capacity. These soil factors need to be taken into account during the revegetation of disturbed areas to prevent soil loss after the Project is completed.

8.9.4 Impacts

8.9.4.1 Environmental Checklist

Table 8.9-3 provides the CEQA Checklist questions that are used in this SPPE Application to assess the significance of potential impacts.

8.9.4.2 Discussion of Impacts

The following information is intended to allow assessment of impacts associated with the specific proposed Project activities.

MEGS Site

The sole soil type mapped on the MEGS site is Veritas fine sandy loam [266]. During construction at the site, the entire 12.25-acre property will be disturbed. The northern 8 acres will be permanently used for the proposed power plant (6 acres) and access, emergency access, and transmission lines (2 acres). The remaining 4.25 acres would be used for equipment laydown and parking during construction. After construction, the 4.25 acres would be available for sale, equipment storage, or future development as determined by the MID Board of Directors. After completion of the MEGS Project, the laydown areas will be graded and covered (with vegetation or gravel) to minimize subsequent water and wind erosion. Because this site has already been cleared and graded, the impacts on biological characteristics of the soil are expected to be minimal.

TABLE 8.9-3
CEQA Checklist

Impacts	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
SOILS —Would the Project:				
Convert to non-agricultural use the Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps for the Farmland Mapping and Monitoring Program by the California Resources Agency?				X
Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?			X	
Impact jurisdictional wetlands?				X
Result in substantial soil erosion?		X		
Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Changes in the physical characteristics of the soil will occur due to mechanical compaction required to provide suitable foundation support for the structures associated with the proposed generating facility. Mechanical compaction will increase the *in situ* density of the soil and reduce its porosity and permeability. A portion of the property would be graded and paved. This activity will reduce surface infiltration of the site and increase surface runoff. The additional surface water runoff will be directed via catchment basins and underground culverts, and will be discharged to the City of Ripon's stormwater system.

The MEGS site has not been used for agricultural purposes since at least 1997. The FMMP is currently in the process of updating its Important Farmland mapping for San Joaquin County, and the modifications will be published in revised maps approximately six months after completion of the update process. If the field verification confirms that the MEGS site is still idle, the status of the property would likely be downgraded to Farmland of Local Importance (Patch, 2003). This status would not qualify as "Farmland" (defined as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) in Table 8.9-3 CEQA Checklist. Given the current zoning of the MEGS Project area for heavy industrial use by the

City of Ripon and its annexation into the City limits, it is very unlikely that this area will be returned to agricultural production. For these reasons, the MEGS Project is not considered to result in conversion of “Farmlands” to non-agricultural use.

The soil loss potential from water erosion was not calculated because the construction activities will occur within previously cleared or developed portions of the City of Ripon. Proposed construction activities will employ mitigation and sedimentation/erosion controls consistent with construction best management practices (BMPs) to avoid water and wind erosion. Problems with offsite movement of soil are not anticipated given the soil types and nearly level nature of the MEGS property and surroundings. After the facilities are constructed, bare soil areas will either be revegetated or covered with a protective gravel layer.

There are no anticipated risks due to expansive soils associated with the Project or linears. The mapped soils units in the MEGS Project area are loamy sands or sandy loams and the presence of expansive clays at depth was not indicated in the soil survey information (NRCS, 1992). The proposed MEGS Project will tie into planned sanitary wastewater facilities so onsite septic systems will not be required. The presence of jurisdictional wetlands on the MEGS site or along linear routes is not anticipated.

The entire 12.25 acres of surface soil at the MEGS site will be used during construction. The MEGS site is currently located in the northeast corner of a large former agricultural field. The field was completely disked (though not actively farmed) during 2002. The base grade soils will be compacted to create a suitable support grade for the electrical generating station. Portions of the site not covered by the power generation facility or paved for site access will be covered with gravel to prevent subsequent soil erosion. Surface water runoff will be diverted to the existing City of Ripon stormwater system.

Proposed Overhead Subtransmission Line Alignment

As shown on Figure 8.9-1, the proposed overhead subtransmission route segment leaving the proposed site is located within the Veritas fine sandy loam [266] soil mapping unit. The alignment runs northeast within this same soil mapping unit along the entire route to the existing MID Stockton Substation.

The soils along the proposed subtransmission line route are developed and follow a paved roadway alignment. Temporary disturbances will occur in the bare soil areas immediately surrounding each of the pole locations during construction. After completion of the pole installation, the ground surface surrounding each pole will be restored to the original grade and any excess soil removed to prevent subsequent erosion and sedimentation. At otherwise developed pole locations (i.e., landscaped or paved), the ground surface surrounding the poles will be restored to conditions similar to those existing prior to construction.

Proposed Natural Gas Pipeline Alignments

The gas pipeline runs northerly along Stockton Avenue within the [266] Veritas fine sandy loam soil mapping unit. While considered unlikely, it is possible that soils in the northernmost portion of the gas pipeline could occur within soil associated with the [142] Delhi loamy sand soil mapping unit. Soil impacts will occur in areas previously developed along existing roadway ROWs, as described below.

The pipeline bed material will be placed and compacted, with the remainder of the trench filled with a suitable earthen material to protect the pipeline. If the soil materials excavated

from within the trench are suitable, they will be used for this purpose. The pipe will be placed within the trench and the trench will be backfilled to the original grade, with compaction as needed to prevent subsequent settling at the surface. Any excavated soil material not used within the trench will be removed to prevent subsequent erosion and sedimentation.

The physical effects of compaction within the gas pipeline trench will be increased soil density and reduced permeability. Because the soils that will be excavated for the pipeline along South Stockton Avenue have been previously developed, the effect of these activities on soil biological characteristics is expected to be minimal.

Proposed Water Supply, Wastewater Discharge, Sewer, and Stormwater Pipeline Tie-ins

The proposed MEGS water, wastewater discharge, sewer, and stormwater pipelines will connect directly to planned City of Ripon pipelines within Stockton Avenue immediately adjacent to the site. This work will occur within the existing roadway, therefore no adverse impacts are anticipated.

Operations at the Completed MEGS Facility

The MEGS Project operation will not result in impacts to the soil from erosion or compaction. Routine vehicle traffic during Project operation will be limited to existing roads, most of which will be paved or covered with gravel. Standard operating activities will not involve the disruption of soil. When linear facilities need to be inspected or maintained, vehicle traffic near cultivated areas will be minimized. Anticipated impacts to soil resources from Project operations will be less-than-significant.

There is a concern in some areas that emissions from the generating facility, principally nitrous oxide (NO_x) from the combustors or drift from the cooling towers, would have an adverse effect on soil-vegetation systems in the Project vicinity. This is principally a concern where environments that are highly sensitive to nutrients or salts, such as serpentine habitats, are downwind of the Project. It should be noted that the proposed MEGS facility is a simple-cycle Project with cooling towers that are much smaller than associated combined-cycle projects where emissions are a greater concern.

In this case, the dominant land use downwind of the Project is agriculture and there are no serpentine habitats in the Project area. The addition of small amounts of nitrogen to agricultural areas would be insignificant within the context of fertilizers, herbicides, and pesticides typically used.

Summary of Impacts

There are no lands currently used for agricultural purposes that would be affected by the proposed Project or linear facilities. It is likely that the FMMP status of the MEGS site and surrounding property will be changed this year from Prime Farmland to Farmland of Local Importance. The proposed MEGS Project features all occur within the City of Ripon limits in an area currently zoned for heavy industrial use.

There are areas within San Joaquin County that are considered Farmland of Local Importance, as shown on the maps for the Farmland Mapping and Monitoring Program, along the proposed natural gas pipeline and subtransmission line alignments. However, the proposed pipeline alignments occur within the developed, urban areas of South Stockton Avenue. It is not anticipated that there are any impacts caused by the construction of the gas

pipeline and subtransmission line, such as conversion of agricultural land to non-agricultural land uses as a result of the proposed Project.

Use of BMPs during construction (Section 8.9.5) will reduce the potential for soil erosion to a less-than-significant level. Revegetation or gravel covering undeveloped portions of the MEGS site will reduce the potential for soil erosion after Project completion to a less-than-significant level. Emissions of NO_x during the Project operations is expected to have a less-than-significant impact on the downwind soil-plant systems in the Project vicinity.

8.9.4.3 Cumulative Impacts

The current City of Ripon General Plan designates the MEGS site and vicinity for future heavy industrial purposes, which is consistent with the proposed Project. The MEGS site is currently vacant (cleared and disked). Regardless of the Project, the site would eventually be utilized in accordance with its zoning. Therefore, potential cumulative impacts on conversion of agricultural resources in San Joaquin County associated with the MEGS Project are considered to be less-than-significant.

8.9.5 Mitigation Measures

Erosion control measures would be required during construction to help maintain water quality, protect property from erosion damage, and prevent accelerated soil erosion or dust generation that destroys soil productivity and soil capacity. Temporary erosion control measures could be installed before construction begins, would be maintained and evaluated during construction, and would be removed from the site after the completion of construction.

8.9.5.1 Temporary Erosion Control Measures

Temporary erosion control measures would be implemented before construction begins, and would be evaluated and maintained during construction. These measures typically include revegetation, mulching, physical stabilization, dust suppression, berms, ditches, and sediment barriers. Vegetation is the most efficient form of erosion control because it keeps the soil in place and maintains the landscape over the long-term. Vegetation reduces erosion by absorbing raindrop impact energy and holding soil in place with fibrous roots. It also reduces runoff volume by decreasing erosive velocities and increasing infiltration into the soil.

Disturbed areas would be revegetated with rapidly growing restoration groundcover as soon as possible after construction, with vehicle traffic kept out of revegetated areas. Physical stabilization, such as temporary erosion control matting, may be required depending on the time of year revegetation is performed. If required, revegetation of the area disturbed by construction of the linear facilities would be accomplished using locally prevalent (native), fast-growing plant species.

During construction of the Project and the related linear facilities, dust erosion control measures would be implemented to minimize the wind-blown erosion of soil from the site. Water of a quality equal to or better than either existing surface runoff or irrigation water would be sprayed on the soil in construction areas to control dust and during revegetation.

Sediment barriers, such as straw bales, sand bags, or silt fences will slow runoff and trap sediment. Sediment barriers are generally placed below disturbed areas, at the base of

exposed slopes, and along streets and property lines below the disturbed area. Sediment barriers are often placed around sensitive areas, such as wetlands, creeks, or storm drains, to prevent contamination by sediment-laden water.

The site will be constructed on relatively level ground; therefore, it is not considered necessary to place barriers around the property boundary. However, some barriers would be placed in locations where offsite drainage could occur to prevent sediment from leaving the site. Barriers and other sedimentation control measures would be used to prevent runoff into irrigation ditches located near the site. If used, straw bales would be properly installed (staked and keyed), then removed or used as mulch after construction. Runoff detention basins, drainage diversions, and other large-scale sediment traps are not considered necessary due to the level topography and surrounding paved areas. Any soil stockpiles would be stabilized and covered if left onsite for long periods of time, including placement of sediment barriers around the base of the stockpile. These methods can be employed during trenching operations for the water line and the natural gas pipeline.

8.9.5.2 Permanent Erosion Control Measures

Permanent erosion control measures on the site will be addressed as part of the mitigation monitoring plan. The plan could include items such as drainage systems, slope stabilization, and long-term revegetation or landscaping. Revegetation or landscaping would follow from planting for short-term erosion control.

The mitigation monitoring plan will be developed in conjunction with CEC staff to set performance standards and monitor the effectiveness of revegetation mitigation measures. This plan will address the timing and methods for monitoring plant establishment, as well as reporting and response requirements.

8.9.6 Permits and Agency Contacts

Permits required for the Project, the responsible agencies, and proposed schedule are shown in Table 8.9-4.

TABLE 8.9-4

Permits and Agency Contacts for Agriculture and Soils

Permit or Approval	Schedule	Agency Contact	Applicability
City Approval of Grading Plan	Prior to construction	Matt Machado, City Engineer City of Ripon 259 N. Wilma Avenue Ripon, CA 95366 209-599-2108	Grading of site surface
City of Ripon Encroachment Agreements	Prior to construction	Matt Machado, City Engineer City of Ripon 259 N. Wilma Avenue Ripon, CA 95366 209-599-2108	Construction of MEGS facilities within City ROWs
City of Ripon Franchise Agreements	Existing agreement between MID and City of Ripon	Everett L. Compton, City Administrator City of Ripon 259 N. Wilma Avenue Ripon, CA 95366 209-599-2108	For proposed MEGS facilities within City ROWs

Construction Activity, Stormwater and NPDES Permit	Prior to construction	Brett Stevens, Water Quality Engineer RWQCB 3443 Routier Road, Suite A Sacramento, CA 95827-3003 916-255-3063	Regulation of stormwater discharge from site and linear facilities during construction
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8.9.7 References

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